THE IMPACT OF COMPUTERS ON THE IU LIBRARIES: A PROGRESS REPORT

by Gary Wiggins

Head, Chemistry Library

Much of the planning for future computing applications in the IU Libraries system is directed toward allowing information which is accessible in or through the library to be fully transportable to the user's workstation. Information found in traditional printed library materials (as well as data from onsite and remote databases) should in the future be as easy to take with you in computer-readable form as a photocopy is today.

It is with electronic formats of information that the Libraries will have the greatest and most far-reaching impact on research at IU over the next decade. All library service points should have user workstations which provide the capability to access remote or on-site databases and download data in a form which allows the researcher to easily incorporate the information into a research or teaching project. The minimum configuration of equipment includes a dedicated microcomputer, telecommunications device, software, optical scanner with optical character recognition capabilities, a printer, and other hardware as needed. Such library user workstations will soon be needed in numbers roughly equivalent to the number of photocopy machines currently in the libraries.

A. The Libraries Automation Project.

Within two years the fruits of the massive Libraries automation project, based on the Northwestern University software
NOTIS, will begin to be seen. The automation project is a multi-million dollar endeavor to provide five computer-based components which are not currently available in the libraries system. These are an online public access catalog, a serials control system, a circulation control system, a book acquisitions system, and a non-public catalog (including authority files). The contract has recently been signed for the NOTIS system, and the initial $1.12 million to initiate the project has been received from a special appropriation administered by the Indiana Higher Education Commission. The system is being implemented on the Information Services' IBM computer.

The ultimate goal of the library automation projects in Indiana is to link all academic libraries and to provide better access to the materials to all citizens of the state. Since 1976, the IU Libraries system has cataloged books through an online bibliographic utility called OCLC. IU also uses the OCLC interlibrary loan subsystem to identify libraries throughout the nation from which to borrow materials. It is through OCLC that we share cataloging records with other libraries, thus saving enormous numbers of man-hours to catalog materials. The OCLC archival tapes for IU also provide the database of records, including holdings of journals, which will be loaded into the NOTIS system. Thus, successful implementation of NOTIS is dependent to a large extent on the continued use of OCLC.

Libraries and departments should be equipped to take maximum advantage of the NOTIS system. Information Services and BACS
have established a bridge which will permit users to dial in through remote terminals or microcomputers using BACS accounts.

For library use direct linkages will be provided through the twisted pair telephone jacks to be installed next summer.

B. Databases Offered Through BACS/Other Database Searching.

Plans are underway to lease large bibliographic and other types of databases and mount them for searching on the BACS computer system. The Libraries are responsible for selecting and funding the databases; BACS is to select and fund the database search software. While these databases will be accessible to anyone through the campus Ethernet network, they will also be available through public-use microcomputers in the Libraries. It is possible that the software which has been leased for the Libraries automation project (the NOTIS software) will be used for this service. BACS will support at least one PC database search software package such as AskSam for local manipulation of downloaded records.

There are other avenues to database searching which are being explored. These include the use of front-end software systems like STN Express and Grateful Med. Such front-end software eliminates the need for the user to learn the complicated logon sequences and command-driven search languages of the database vendors.

C. CD-ROM Databases

There are many databases in the Libraries in CD-ROM format.
These include databases corresponding to Books in Print, Dissertation Abstracts, Index Medicus, Psychological Abstracts, etc. CD-ROM databases generally come with their own search software. As presently configured, they require a dedicated microcomputer and CD-ROM player. All of the CD-ROM databases have hefty price tags, but they can be very cost effective in information retrieval. It is possible to provide networked access from multiple sites to CD-ROM files. Products are beginning to appear which serve this purpose. One is the CD Net/CD Server product line from Meridian Data. CD Server is available in an Ethernet model and will handle from one to seven CD ROM drives.

D. Document Delivery Services

The Libraries are moving toward a broad definition of document delivery which encompasses the use of appropriate technology to deliver information in any format from the location in which it is held to the user. All science libraries on campus plus several units at the Main Library now are equipped with telefacsimile machines. As more users purchase FAX boards for their PCs, the options for document delivery increase dramatically. Information can be scanned into a PC at the library and transmitted into the user's PC via the FAX board. The Libraries should have high quality flatbed graphics scanners with software which allows them to serve as optical character recognition (OCR) systems. Printing a scanned image requires a laser printer. (A dot matrix printer, even at 150 dots per inch,
is too sparse to give a good finished product.) To work with graphics in this manner really demands a larger 286 or 386 computer; smaller machines are just too slow.

Scanned images can easily be imported into presentation programs like Show Partner or the IBM PC Storyboard. As the OS/2's Presentation Manager penetrates the market, the incorporation of scanned images into word processing documents and database records will become more routine. For the immediate future, the desktop scanner offers an attractive alternative.

E. Toward Broader Uses of the Materials Budget.

Scholars must now ask themselves how often they should realistically expect the books, journals, or other printed materials needed for their research or teaching to be physically housed within the IU Libraries system. It is clear that comprehensive collections can no longer be built at IU. Therefore, clear guidelines need to be formulated for the level of research materials which will be provided within the IU Libraries system collections. Then, it is essential that no differentiation be made among departments or disciplines for access to materials not locally owned. The primary avenue to such materials for some time to come will be document delivery of printed books, copies of journal articles, and other printed materials obtained from sources outside the IU libraries system. Increasingly, however, this will involve the use of electronic sources of information. To cover the cost of these options over the next decade, the Libraries materials budgets must reserve...
significant funds for other forms of information delivery. This would cover most of the costs of traditional interlibrary loan, the use of commercial document suppliers, and electronic forms of information.

The Libraries must see that scholars have the resources with which to continue to do high-quality research and teaching at Indiana University. By utilizing the capabilities of the computer, we can be sure to make the most effective use of the funds available to support the Libraries' contribution to the research and teaching efforts of the faculty. In that manner, the computer promises to solidify the long-standing partnership between faculty and librarians.
information technology has in many ways brought about great progress as well as comforts to modern life, it has also raised the question of technological influences on issues such as ethics, privacy, values, morals, and psychology which are of critical importance in our daily lives. Problems related to the abovementioned variables continue to trouble society and the individual in and thus far the educational system has not helped solve these problems. ...The Impact of Computers in Society Everyone knows that this is the age of computer and vast majority of people are using computer. Development of science and technology has direct effect on our daily life as well as in our social life. Computer technology has made communication possible from one part of the world to the other in seconds.